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## PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)

15436.440.12

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Typed or printed name \_\_\_\_\_

Application Number

10/607,629

Filed

June 27, 2003

First Named Inventor

Jae-Hyun Ryou

Art Unit

2828

Examiner

T. Nguyen

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

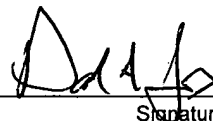
I am the

☐ applicant/inventor.

☐ assignee of record of the entire interest.  
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.  
(Form PTO/SB/96)

☒ attorney or agent of record.  
Registration number 50,084

☐ attorney or agent acting under 37 CFR 1.34.  
Registration number if acting under 37 CFR 1.34 \_\_\_\_\_

  
Signature

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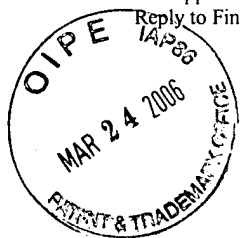
3/24/06  
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below\*.

☒ \*Total of 1 forms are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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**Pre-Appeal Brief Request for Review**

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PATENT APPLICATION  
Docket No. 15436.440.12

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:		)
	Jae-Hyun Ryou et al.	)
Serial No.:	10/607,629	) Art Unit
		) 2828
Filed:	June 27, 2003	)
For:	A DIELECTRIC VCSEL GAIN GUIDE	)
Confirmation No.:	8741	)
Customer No.:	022913	)
Examiner:	Tuan N. Nguyen	)

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Mail Stop **Appeal**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

A succinct, concise and focused set of arguments for which the panel review is being requested begins on page 2.

## REMARKS

Reconsideration of the application by a panel of examiners is respectfully requested in view of the following remarks. Please note that the following remarks are not intended to be an exhaustive enumeration of the distinctions between any cited references and the claimed invention. Rather, the distinctions identified and discussed below are presented solely by way of example to illustrate some of the differences between the claimed invention and the cited references. In addition, Applicants request that the Panel carefully review any references discussed below to ensure that Applicants understanding and discussion of the references, if any, is consistent with the Panel's understanding.

### I. CLAIM REJECTIONS

#### A. Rejection Under 35 U.S.C. §102(b)

The Examiner rejects claims 1-3, 5-6, 8, 14, 19-20 under 35 U.S.C. § 102(b) as being anticipated by *Jewell* (United States Patent No. 5,719,891) (hereinafter referred to as "*Jewell*"). Because *Jewell* does not teach or suggest each and every element of the rejected claims, Applicants respectfully traverse this rejection as based on clear error in view of the following remarks.

Figure 5C of *Jewel* illustrates a light emitter 110 including a substrate 82, a bottom mirror 84, a first spacer 146, an active region 86, a second spacer 148, nonoxidizing layers 26, an oxidation barrier 32, and a semiconductor top mirror 112. (Emphasis added). As shown, the active region is separated from the nonoxidizing layers 26 and the oxidation barrier 32 by the second spacer 148, and thus, not deposited on the active region. Col. 7, lines 31-37.

It is well established that to be anticipated, "[t]he identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989).

In direct contrast to *Jewell*, independent claim 1 recites the element "a dielectric gain guide situated on said active area, wherein the dielectric gain is deposited on the active area...." (Emphasis added). Independent claim 8 recites the element "forming a dielectric gain guide on said active region...." (Emphasis added). Independent claim 14 recites the element

“confinement means situated on said active means...” (Emphasis added). Independent claim 19 recites the element “the layer of dielectric situated on said cavity...” (Emphasis added). The Applicant respectfully traverses the assertion on page 2 of the Office Action that the purported “confinement means or dielectric gain [is] on [the] active area” in Figure 5C of Jewel. (Emphasis added). As can be appreciated from Figure 5C of Jewel, elements 26, 28, and 32 are separated from the active region 86 by the second spacer 148 and therefore in direct contrast to independent claims 1, 8, 14, and 19. Thus, the Applicant requests that the rejection of claims 1, 8, 14, and 19 be withdrawn as based on clear error. Claims 2-7 depend from claim 1, claims 9-13 depend from claim 8, claims 15-18 depend from claim 14, and claims 20-24 depend from claim 19. These dependant claims include every element of the claims from which they depend. As such, the Applicant requests that the rejection of claims 2-7, 9-13, 15-18, and claims 20-24 be withdrawn at least for the same reasons as claims 1, 8, 14, and 19.

**B. Rejection Under 35 U.S.C. § 103**

The Examiner rejects claims 4, 7, 9-13, 15-18, 21, and 22-24 under 35 U.S.C. § 103 as being unpatentable over *Jewell*.

The Applicant respectfully traverses the assertion that dielectric material from a group SiO<sub>2</sub>, TiO<sub>2</sub>, and SiN is within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice in view of *Jewell*.

According to the applicable statute, a claimed invention is unpatentable for obviousness if the differences between it and the prior art “are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art.” 35 U.S.C. § 103(a) (2005); *Graham v. John Deere Co.*, 383 U.S. 1, 14 (1966); MPEP 2142. Obviousness is a legal question based on underlying factual determinations including: (1) the scope and content of the prior art, including what that prior art teaches explicitly and inherently; (2) the level of ordinary skill in the prior art; (3) the differences between the claimed invention and the prior art; and (4) objective evidence of nonobviousness. *Graham*, 383 U.S. at 17-18; *In re Dembiczak*, 175 F.3d 994, 998 (Fed. Cir. 1999). It is the initial burden of the PTO to demonstrate a *prima facie* case of obviousness, which requires the PTO to show that the relied

upon references teach or suggest all of the limitations of the claims. MPEP 2142 (emphasis added).

According to MPEP section 2143:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)."

(Emphasis added).

According to *Jewell*, "[t]he oxidized layers are typically materials primarily comprising AL as the group-III element..." Col. 7, ll. 4-5. *Jewell* continues by listing 4 rows (col. 7, ll. 6-9) of examples of oxidized layer materials. As discussed by *Jewell* in reference to Figure 1B, "the interdiffusion of oxidizing layer 24 and nonoxidizing layer 26 may be brought about, for example, by beam 36, followed by an annealing process." Col. 5, ll. 33-35. Thus, as can be appreciated from Figure 1B, the oxidation of the oxidized portion 28 is accomplished using the beam 36 and an annealing process after the layers have been formed. Thus, the Examiner has not even shown that *Jewell* teaches a dielectric material deposited on the active layer, but rather a material that oxidizes after being placed on a spacer in response to application of a beam and an annealing process.

It has not been shown that use of dielectric material from a group SiO<sub>2</sub>, TiO<sub>2</sub>, and SiN deposited on the active layer in combination with the other elements of the claims exists in the prior art along with the necessary motivation. Thus, the rejection appears to be based on impermissible hindsight reconstruction, which is clear error. "The mere fact that a device or process utilizes a known scientific principle does not alone make that device or process obvious." *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044 (Fed Cir. 1991). The PTO cannot simply make conclusions based on its own understanding or experience – or on its allegation of what would be basic knowledge or common sense. Rather, the PTO must point to some concrete evidence in the record in support of the findings. *In re Zurko*, 59 USPQ2d 1693, 1697 (Fed. Cir. 2001) (emphasis added; footnote omitted).

If, however, the Examiner is relying on the personal knowledge of the Examiner, pursuant to 37 C.F.R. 1.104(d)(2), Applicant hereby respectfully requests an Examiner affidavit that: (i) specifically identifies any and all references(s), other than those that have been specifically cited by the Examiner, upon which the obviousness rejection of claims 4, 7, 9-13, 15-18, 21, and 22-24 is based; and (ii) provides complete details concerning the reasoning and analysis of the Examiner concerning those references as those references are purported to apply to the rejection of claims 4, 7, 9-13, 15-18, 21, and 22-24.

If the origin of teachings and motivation set forth for the proposed combinations exists in the references then the Applicants request that this origin be set forth by the Patent Office as suggested by MPEP 2144.08 III which states, "[w]here applicable, the finding should clearly articulate which portions of the reference support any rejection. Explicit findings on motivation or suggestion to select the claimed invention should also be articulated in order to support a 35 U.S.C. 103 ground of rejection. *Dillon*, 919 F.2d at 693, 16 USPQ2d at 1901; *In re Mills*, 916 F.2d 680, 683, 16 USPQ2d 1430, 1433 (Fed. Cir. 1990). Conclusory statements of similarity or motivation, without any articulated rationale or evidentiary support, do not constitute sufficient factual findings."

### CONCLUSION

In view of the foregoing, Applicants believe the rejections are based on clear error and the claims are in allowable form. In the event that the Examiner, or the panel, finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, or which may be overcome by an Examiner's Amendment, the Examiner is requested to contact the undersigned attorney.

Dated this 24 day of March, 2006.

Respectfully submitted,



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